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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,956	11/27/2006	Richard M. West	PL0379	2347

22840 7590 12/05/2008  
GE HEALTHCARE BIO-SCIENCES CORP.  
PATENT DEPARTMENT  
800 CENTENNIAL AVENUE  
PISCATAWAY, NJ 08855

EXAMINER
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CHANDRAKUMAR, NIZAL S

ART UNIT	PAPER NUMBER
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1625

MAIL DATE	DELIVERY MODE
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12/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,956	<b>Applicant(s)</b> WEST ET AL.	
	<b>Examiner</b> NIZAL S. CHANDRAKUMAR	<b>Art Unit</b> 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

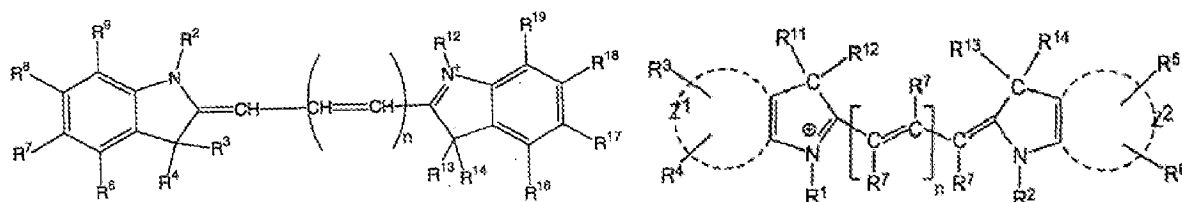
### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/25/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of Group I (claims 1-14) in the reply filed on 10/30/2008 is acknowledged. The traversal is on the ground(s) that the nature and position of attachment of the variables is not the same in the cited prior art. This is not found persuasive because the special technical feature as not being a contribution over the prior art is based on the invariant group present in the different groups and in the prior art being the same.



Prior art

Instant formula

The requirement is still deemed proper and is therefore made FINAL.

Claim 15-18- withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/30/2008.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claims 1-6 and 9-14 are under prosecution.

### ***Claim Rejections - 35 USC § 102***

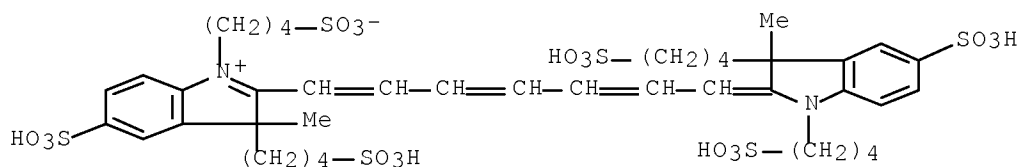
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9-13 rejected under 35 U.S.C. 102 (b) as being anticipated by the prior arts.

Fuji Photo Film Co. (JP 0531330, cited by the applicant)



● 5 K

corresponding to compounds of the instant formula wherein

Z1 and Z2 form one ring;

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R1 = R2 of which the E is 4 carbon spacer and F is a target bonding group (see applicants definition of this functionality in specification paragraphs [0007] and [0017]: and note that sulfonation is a pervasive biological phenomenon).

R4 = R5 = R6 = R7 of which E is a bond and F is sulfonic acid group;

RR is H;

n is 1;

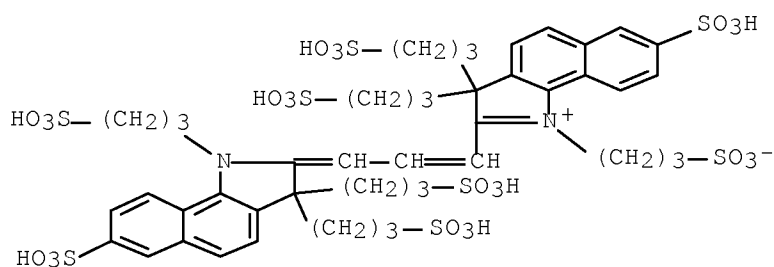
Of R11, R12, R13, R14,

R11 and R13 is C1-methyl,

R12 = R13 of which k is 4 and W is sulphonic acid.

Likewise,

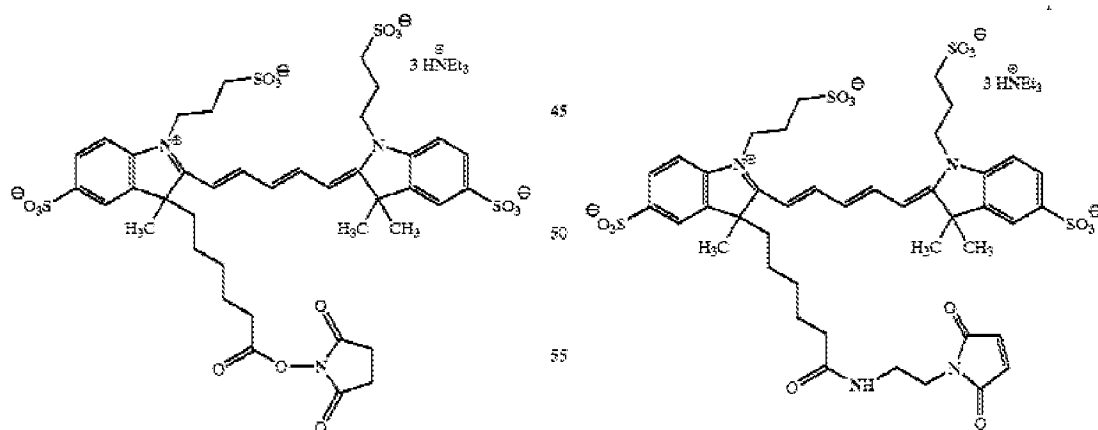
Fuji Photo Film Co. (JP 04186342) teach,



●7 Na

Leung et. al. (US 6974873 B2) teach columns 33 and 34, lines 40-60,

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corresponding to compounds of the instant formula

wherein Z1 and Z2 independently represent the carbon atoms necessary to complete a one ring; n is 2; E of E-F of R4 is a single bond, F is sulfonic acid (a target bind binding group, see above rejections over Japanese art);

E of E-F of R1 is spacer of 3 carbon chain and F is sulfonic acid;

R11 is methyl (C1-alkyl)

K of (CH<sub>2</sub>)<sub>k</sub>-W of R12 is 5, and the W is succinimidyl ester (active ester forms covalent amide formation with amino of group of biological (target) molecules);

R13 and R14 are methyl (C1-alkyl);

R7s are H (see definition of R7 on page 4, in claim 1, line 5);

Likewise for the second structure

F is maleimide for formation of reversible linkage by Michael addition to thiol groups, for example, of Cys of proteins) or irreversible linkage with target nucleophiles for covalent attachment.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 and 9-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leung et. al. (US 6974873 B2).

102(b) Reasoning: See Rejections above.

103 Reasoning.

Leung et. al. teach compounds that fall within the scope of the instantly claimed formula.

While Leung et. al. do not teach all the conceivable compounds of the instant formula, the compounds of Leung et. al. and the instantly claimed compounds are identical in basic structural template, differing only in the organic groups that decorate the core structure. (See prior art compounds shown 102 rejection and compounds shown on pages 21, 27 and 35 of the instant

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specification). Consequently both sets of compounds are anticipated to display similar reactivity towards macromolecular targets. The use of commonly used groups and varying the position of their attachment are well within the level of one of ordinary skill in the art in the routine optimization of physical and chemical properties of known compounds. Therefore one of ordinary skill in the art would be motivated to make the claimed compounds in searching for alternate forms and additional derivatives (of compounds taught by Leung et. al.), using commonly employed substituents and functionalities with reasonable expectation of success. Obviousness based on similarity of structure and functions entails motivation to make the claimed compound in expectation that compounds of similar in structure will have similar properties; therefore, one of ordinary skill in the art would be motivated to make the claimed compounds in searching for new compounds.

Likewise, the other references cited above under 102 (b) rejections are equally applicable as references for rejections under 103.

Claims 1-6 and 9-14 are not allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIZAL S. CHANDRAKUMAR whose telephone number is (571)272-6202. The examiner can normally be reached on 8.30 AM - 4.30 PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571 0272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nizal S. Chandrakumar

/D. Margaret Seaman/

Primary Examiner, Art Unit 1625